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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,396	06/18/2002	Stephen R. Betso	60021 FF1	3832

22515 7590 10/05/2004

THE DOW CHEMICAL COMPANY  
INTELLECTUAL PROPERTY SECTION  
2301 N BRAZOSPORT BLVD  
FREEPORT, TX 77541-3257

EXAMINER

VIJAYAKUMAR, KALLAMBELLA M

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/049,396

Applicant(s)

BETSO ET AL.

Examiner

Kallambella Vijayakumar

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

***Detailed Action***

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- This application is a 371 of PCT/US00/21450 dated 08/04/2000 and Claims 1-11 are currently pending with the application.
- The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the examiner on form PTO-892 has cited the references and/or the examiner has cited them on PTO-1449, they have not been considered.

***Claim Rejections - 35 USC § 112***

***Claim Rejections - 35 USC § 101***

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

- Claims 8-9 provides for the use of the composition, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 8-9 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

- Claims 10-11 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "improved" in claims 10-11 is a relative term which renders the claim indefinite. The term "improved" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

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#### *Claim Rejections - 35 USC § 103*

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
1. Claims 1-3 and 6-11 are rejected under 35 U.S.C. 103(a) as obvious over McKay et al (US Patent 5,869,591) in view of either Spenadel (US Patent) or Goto et al (JP 09-111089).

McKay et al disclose the composition and making of thermoset random interpolmer foam comprising of an a-olefin such as ethylene and a vinylidene aromatic compound such as styrene, wherein the foam could be configured into any desired shape and forms cable insulation and/or a cable jacketing. McKay et al teach the addition of 0-50 wt% carbon in to the composition, based on the needs of the application and the semiconductivity of the interpolmer would be obvious, as shown by Goto et al (Abstract). McKay et al further disclose various ways of forming the cable including by filler coating (Abstract, Col-2, Lines: 38-42; Col-5, Lines: 57-62; Col-6, Lines: 47-64; Col-7, Lines: 21 to Col-8, Line-41; Col-27, Lines: 5-34; Col-27, Line-61 to Col-28, Line-11, Lines: 33-34). Further, It is the examiners position that that the requirement of the endurance time (in seconds) of such a low value as log10 of about 2.24 per the limitation of the instant claims 8-11 would obviously be met, because both the composition and the device of McKay et al are almost identical to those by the applicants.

The presence of a central conductive core, a protective semi-conductor/insulator layer, followed by an insulating/protective covering was not explicitly disclosed by McKay et al.

In the analogous art Spenadel et al teach various configurations of fabricating a cable including a cable having a central conductive core, a protective semi-conductor/insulator layer, followed by an insulating/protective covering (Fig-3), wherein they disclose:

**"The device of the present invention may take on any form that is suitable for the use to which it will serve. The components of the devices of the present invention, i.e. The insulating, semiconducting, and conducting members, can be arranged relative to each other in a wide variety of ways, depending upon the desired use of the device."**

And teach the benefits of such a construction of the cable having lower signal losses and less susceptibility for interferences by noise.

It would have been obvious to one with ordinary skill in the art to modify the composition of McKay et al by optionally including the carbon as conductive filler to benefit from improved semiconductivity, dielectric, electrical breakdown as evidenced by endurance time or any other suitable parameters known in the art and the mechanical properties, because McKay et al are suggestive of such variations and their benefits, wherein the semiconductivity of the composite would have been obvious per the teachings of Goto et al; and/or fabricate the device/cable with a central core of conducting material covered by a semiconducting layer followed by an insulating/protective layer and continue the sequence of such layers by optionally having a second semiconductive layer to benefit improved electrical break down properties and lowered interference per the teachings of Spenadel et al, because all the teachings are in the analogous art dealing with similar composites and similar devices, and with the expectation of reasonable success in obviously arriving at the limitations of the instant claims by the applicants.

2. Claims 1-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Vestberg et al (US Patent 5,164,456) in view of Spenadel et al (US Patent 5,246,783).

Vestberg et disclose forming a composite of polyolefin-vinyl polymer composites by impregnating polyolefin particles <polyethylene> with a vinyl monomer <styrene/substituted styrenes>, that are the same polymers being used/claimed by the applicants, and the composite used in forming foam plastic or components of semiconductor layers on electric cables (Abstract, Col-1, Lines: 6-10, Col-2, lines: 59-67; Col-3, lines: 29-43). It would be the examiners position that that the requirement of the endurance time (in seconds) of such a low value as log10 of about 2.24 would obviously be met by the sleeve over the central conductor per the limitation of the instant claims 8-11, because both the composition and the device of Vestberg et al are almost identical to those by the applicants.

Vestberg et al do not disclose or suggestive of a device fabricated from the composite, but however suggestive of using the composite in making of devices such as cable.

In the analogous art, Spenadel et al disclose electrical devices such as cables utilizing polymers having resistance to water treeing, electric treeing and dielectric properties, wherein the polymer comprises of a copolymer of ethylene and alpha-olefins and C3-C20 polyenes such as norbornene including 5-cyclohexylidene-2-norbornene, that are the same components used/claimed by the applicants in the devices/cable. Spenadel et al teach controlling various properties of the composites by controlling parameters such as melt index (MI), and filling the composite composition with carbon black to effect and vary semiconductivity, physical, dielectric and electrical properties and their benefits <Abstract, Col-1, Lines: 16-23; Col-4, Lines: 5-38; Col-5, Line-52 to Col-6, Line-55, Col-7, Lines: 15-65, Col-8, Lines: 30-35; Lines

48- 55; Col-10, Line-42-Col-11, Line-6): Spenadel et al further teach the various configurations of fabricating a cable (Fig-3).

"The device of the present invention may take on any form that is suitable for the use to which it will serve. The components of the devices of the present invention, i.e. The insulating, semiconducting, and conducting members, can be arranged relative to each other in a wide variety of ways, depending upon the desired use of the device."

It would have been obvious to one with ordinary skill in the art to modify the composition of the polymer in the device of Vestberg by optionally varying the composition and parameters of making the composite, and/or optionally incorporating carbon black in the composition to benefit from improved electrical and dielectric properties and breakdown strength as desired based on the application and its end use, because Spenadel et al teach these aspects and their benefits in the analogous art, and with the expectation of reasonable success in obviously arriving at the limitations of the instant claims by the applicants.

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#### ***Double Patenting***

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The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 6, 10 rejected under the judicially created doctrine of double patenting over claims 1, 2, 3, 11, 16 and 21 of U. S. Patent No. 6,524,702 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: The instant claimed device and the polymer composition are not distinctly different from those claimed in the US Patent 6,524,702, and the device claimed by both the instant application and the US patent almost identical materials in almost identical configurations.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application, which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

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### *Conclusion*

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kallambella Vijayakumar whose telephone number is 571-272-1324. The examiner can normally be reached on M-Th, 07.00 - 16.30 hrs, Alt. Fri: 07.00-15.30 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KMV  
09/23/2004

  
**Mark Kopec**  
**Primary Examiner**